

Message

From: Nickerson, Jay [Jay.Nickerson@dep.nj.gov]
Sent: 6/18/2020 4:27:14 PM
To: Smeraldi, Josh [Smeraldi.Josh@epa.gov]
CC: Clark, Daryl [daryl.clark@dep.nj.gov]; Kozlowski, Nicole [Nicole.Kozlowski@dep.nj.gov]; Anne Hayton [Anne.hayton@dep.nj.gov]
Subject: Fw: Riverside Industrial Park SF site - Development of soil remedial footprints/June 8th 2020 Feasibility Study

Josh, Please note that, Anne Hayton's comments provided below and provided to you previously, addresses the NJDEP's response to the June 8th 2020 Feasibility Study.

If you have any questions, please contact me. Regards Jay

From: Hayton, Anne <Anne.Hayton@dep.nj.gov>
Sent: Thursday, June 18, 2020 10:32 AM
To: Nickerson, Jay <Jay.Nickerson@dep.nj.gov>
Cc: Kozlowski, Nicole <Nicole.Kozlowski@dep.nj.gov>; Motter, Allan <Allan.Motter@dep.nj.gov>; Clark, Daryl <Daryl.Clark@dep.nj.gov>
Subject: Fw: Riverside Industrial Park SF site - Development of soil remedial footprints

Good Morning Jay - Please see email trail from yesterday and this morning, below.

First -- Based on BEERA comments sent last evening (below), AmyMarie of EPA's team reached out for a quick discussion to show me the draft new text in FS under revision by EPA's team. DEP rules for NAPL are included (NJAC 7:26-5.1(e)) and to be handled during implementation of a selected remedy. Also she *tentatively* added, that although NJ's IGWSSLs are currently considered TBCs under CERCLA, they are expected to become promulgated State Regs in the near future (within a year) and could become ARARs and may be considered during Design -- but EPA legal/regulatory need to approve this language/approach. Currently, IGWSSLs were not used in remedial decision-making because PPG dismissed them and EPA is has identified other PRGs and ARARs that are being used for soil remedial footprint identification in constructing the alternatives in the FS.

Second -- Josh Smeraldi will be in touch with you to set up a meeting to discuss prospective GW alternatives with you Daryl primarily, and possibly with Nicole and I as optional. The focus is groundwater.

If you have any questions, please let me know. Thanks, Anne

Anne Hayton, Research Scientist

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From: AccardiDey, AmyMarie <AmyMarie.Accardi-Dey@wsp.com>
Sent: Thursday, June 18, 2020 10:11 AM
To: Hayton, Anne <Anne.Hayton@dep.nj.gov>; Smeraldi, Josh <Smeraldi.Josh@epa.gov>; Bounkhay, Mina <mina.bounkhay@wsp.com>
Cc: Kozlowski, Nicole <Nicole.Kozlowski@dep.nj.gov>
Subject: [EXTERNAL] RE: Riverside Industrial Park SF site - Development of soil remedial footprints

Anne – Thanks for talking with me.

Josh – All of NJDEP comments are addressed in the text. I left you a voice message on a few items.

AM

AmyMarie Accardi-Dey, PhD, PG, CPC
Phone: 1-914-620-5110

From: Hayton, Anne <Anne.Hayton@dep.nj.gov>
Sent: Wednesday, June 17, 2020 5:56 PM
To: AccardiDey, AmyMarie <AmyMarie.Accardi-Dey@wsp.com>; Smeraldi, Josh <Smeraldi.Josh@epa.gov>; Bounkhay, Mina <mina.bounkhay@wsp.com>
Cc: Kozlowski, Nicole <Nicole.Kozlowski@dep.nj.gov>
Subject: Riverside Industrial Park SF site - Development of soil remedial footprints

All - I realize this is being sent late in the day, but I was in meetings most of the afternoon through 4:30p. However, Nicole and I wanted to provide follow-up information for you based on our discussion earlier today.

The approach presented during today's call for application of single-point contaminant delineation using both historical and RI data, and as shown through your draft FS maps, is considered acceptable for developing the necessary candidate soil remedial action footprints for cost estimating purposes in the FS.

Based on our discussion, follow-up information is provided below on several topics below.

I. "Waivers" referenced in the 8 Jun 20 FS are in Section 3.3 and appear strictly related to possible situations for ARAR waivers under CERCLA. The last reference to a waiver was for Alt 4 only, which states:

"Compliance with ARARs

"By removal and appropriate off-site disposal of soil/fill exceeding the established PRGs, this alternative may comply with chemical-specific ARARs for lead in soil/fill in that area, but would *require a waiver of ARARs for COCs remaining in soil/fill*. Safety concerns related to excavation adjacent to a building will result in offset excavation from building foundation resulting in soil/fill designated for removal to remain in place." (italics added for emphasis).

The above statement appears to relate to CERCLA-related waivers.

II. NAPL and Impact to Groundwater Soil Screening Levels (IGWSSLs) With regard to handling of NAPL and elevated levels of VOCs (or other mobile contaminants) in soil, relative to abating ongoing sources of

contamination to either groundwater (or surface water), provided below is information that should be reflected in the final FS for addressing NJDEP SRWMP regulations and guidance on these topics. In addition to horizontal and vertical delineation of soil to NJDEP direct contact soil remediation standards, as we've been discussing for this site, *N.J.A.C. 7:26E Subchapter 4.2, RI of Soil*, also requires the following actions for remedial action planning purposes:

"..3. For soil contamination associated with a site-related area of concern, delineate the horizontal and vertical extent of all soil contamination in the unsaturated zone which contains contaminants above the impact to ground water soil remediation standard without regard to the property boundary;

4. Delineate the horizontal and vertical extent of free product and residual product in both the saturated and unsaturated zones without regard to the property boundary; ..." .

Typically, these actions are completed during the RI, but if not, areas known or suspected of this type of contamination (either free or residual product, i.e, various forms of NAPL, sheens and staining of same; and, contaminants (generally VOCs) found at levels greater than the Department's default Impact to Groundwater Soil Screening Levels (IGWSSLs) in the vadose zone, can be identified for further delineation through remedial design sampling to determine the extent to which these areas should be managed in the final footprint of remedial action areas.

For statute item 4 above, any **NAPL-like material**, the above requirements are re-enforced in Subchapter 5, Remedial Action Requirements, of the same statute, as follows:

7:26E-5.1 (e) Remedial action requirements, which states:

"(e) The person responsible for conducting the remediation shall treat or remove free product and residual product to the extent practicable, or contain free product and residual product when treatment or removal is not practicable. Monitored natural attenuation of free product and residual product is prohibited."

For statute item 3 above, **IGWSSL**: First, for EPA's information, the Department's Impact to Groundwater Soil Screening Levels (IGWSSL), currently considered TBCs, are expected to become ARARs when promulgated in the Department's updated Remediation Standards in April 2021.

Second, the use of a planned deed notice does not preclude the requirement to delineate to the applicable IGWSSL in the unsaturated zone when the IGWSSL is below the NRDCRS (non-residential direct contact soil remediation standard). The rationale for this is to ensure adequate characterization of the magnitude and extent of the contaminants that will remain at the site, and also determine if soil contamination has migrated off the property at any depth above the RDCRS. (Department Guidance: Technical Guidance for SI/RI/RA Verification Sampling for Soil, Section 5.3 (page 21))

https://www.nj.gov/dep/srp/guidance/srra/soil_inv_si_ri_ra.pdf.

Through the 8 Jun 20 FS, Section 3.3, PPG dismisses use of IGWSSLs apparently due to the presence of historic fill and saturated soil. However, soil contamination in the vadose zone (observed to be approximately from ground surface to approximately 6 ft deep at this site), should have been compared to either the default IGWSSLs (https://www.nj.gov/dep/srp/guidance/rs/partition_equation.pdf.), or site-specific values developed following Department guidance. This is mainly applicable for VOCs, which are not typical constituents of historic fill (HF), but instead, are evidence of discharges on or within HF.

Many site-related contaminants for this project fall under the category of being generally immobile and are handled differently from more mobile contaminants such as VOCs.

From Department Guidance https://www.nj.gov/dep/srp/guidance/rs/igw_intro.htm):

The Department has determined that the following chemicals are likely to be strongly adsorbed to soil and are, under certain conditions, not likely to impact ground water. Immobile chemicals are listed here, with bold font indicating site-related potential contaminants of concern: Aluminum, **Copper**, **Lead**, Vanadium, Aldrin, **Benzo(a)anthracene**, **Benzo(a)pyrene**, **Benzo(b)fluoranthene**, **Benzo(ghi)perylene**, **Benzo(k)fluoranthene**, **Bis(2-ethylhexyl phthalate)**, **Butyl benzyl phthalate**, **Di-n-butyl phthalate**, Chlordane, Chrysene, DDD, DDE, DDT, **Dibenz(a,h)anthracene**, Di-n-octyl phthalate, Fluoranthene, Heptachlor, Hepachlor epoxide, Hexachlorobenzene, Hexachloro-1,3-butadiene, Hexachlorocyclopentadiene, Indeno(1,2,3-cd)pyrene, Methoxychlor, **PCBs**, Pyrene, and Toxaphene.

If a 2-foot clean buffer of soil exists between where these contaminants are found at levels exceeding either the default IGWSSL or site-specific derived levels (procedures found at https://www.nj.gov/dep/srp/guidance/rs/igw_intro.htm) and the top of groundwater, further evaluation of these areas is not needed relative to protection of groundwater. Specifically, Department guidance states:

"The person responsible for conducting the remediation will not be required to remediate soil contaminated with immobile chemicals if the person can demonstrate the following:

1. The contaminant is an immobile chemical listed above;
2. That site conditions described below are not present; and
3. There is a clean zone of at least 2 feet between the soil contamination and the ground water. Sampling must be conducted to demonstrate that contamination is not present above the default impact to ground water soil remediation standard within 2 feet of the water table. The default standard can be determined using the Soil Water Partition Equation guidance document."

However, certain site-specific conditions need to be evaluated along with the above factors, and may preclude use of the above provision. Site conditions not compatible with immobile chemical determination include the following:

" A contaminant will not be considered an immobile contaminant when any of the following conditions exist:

1. The contaminant was discharged as part of a mixture that could effect the mobility of the contaminant;
2. A co-solvent is present that could effect the mobility of the contaminant;
3. Soil texture at the site is more coarse than a sandy loam, e.g. classified as sands, or if fill material at the site is more coarse than sandy loam;
4. Soil pH has been altered by the discharge of acids or bases; or
5. The contaminant of concern is present at levels associated with free or residual product."

PPG did not evaluate site soil/fill against the Department's IGWSSLs. I will attempt to identify areas where this issue is observed on site -- but will not be able to do this within this project's tight schedule (end of this week).

Please feel free to contact me with any questions on the above information. Thanks, Anne

Anne Hayton, Research Scientist

Lower Passaic River - Project Technical Coordinator

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